

Education

Ph.D. May 2013 Physical Activity Nutrition and Wellness, Arizona State University, Phoenix, AZ. Dissertation: Effects of Eight Weeks of High Intensity Interval Training on Blood Glucose Control, Endothelial Function, Blood Pressure Control, and Visceral Fat in Sedentary, Obese Adults. Advisor: Dr. Glenn Gaesser

M.Ed. 2006 Exercise Physiology, University of Virginia, Charlottesville, VA. Thesis: The Interrelatedness of Maximal Oxygen Consumption and Economy. Advisor: Dr. Glenn Gaesser

B.A. 2003 Kinesiology, Athletic Training, Point Loma Nazarene University, San Diego, CA. Distinctions project: Neuroticism, Extroversion, and Pain Perception in College Aged Athletes. Advisor: Dr. Leon Kugler

Peer Reviewed Manuscripts (24 Peer Reviewed Manuscripts, 7 first author)

Jarrett, Catherine L., Sawyer, Brandon J., Tucker, Wesley, Bhammar, Dharini M., Ryder, Justin R., Angadi, Siddhartha, and Gaesser, Glenn A. Change in Free-Living Daily Steps does not Affect VO₂max Adaptation in Response to a Supervised Aerobic Walking Program in Females Ages 18-45. *International Journal of Exercise Science* **2025**;18(5), 852 - 863.
DOI: <https://doi.org/10.70252/VNUF3861>

Baughman BR and Sawyer BJ. Comparison of Blood Flow Characteristics in Young Healthy Males between High-Intensity Interval and Moderate-Intensity Continuous Exercise. *Physiologia* **2024**, 4(3), 253-265; <https://doi.org/10.3390/physiologia4030015>

Tucker WJ, Sawyer BJ, Bhammar DM, Ware EW, Angadi SA, Gaesser GA. Treadmill walking economy is not affected by body fat and body mass index in adults. *Physiological Reports* **2024**, 12, e16023. <https://doi.org/10.14814/phy2.16023>

Mahoney JM, Baughman BR, Sheard AC, Sawyer, BJ. Determining the Optimal Workrate for Cycle Ergometer Verification Phase Testing in Males with Obesity. *Sports* **2021**, 9, 30.
<https://doi.org/10.3390/sports9020030>

Sawyer BJ, McMahon N, Thornhill KL, Baughman BR, Mahoney JM, Pattison KL, Freeberg KA, Botts RT. Supra-Versus Submaximal Cycle Ergometer Verification of VO₂max in Males and Females. *Sports* **2020**, 8, 163; doi:10.3390/sports8120163

Dexheimer JD, Brinson SJ, Pettitt RW, Schroeder ET, Sawyer BJ, Jo E. Predicting Maximal Oxygen Uptake Using the 3-Minute All-Out Test in High-Intensity Functional Training Athletes. *Sports* **2020**, 8, 155; doi:10.3390/sports8120155.

Beezhold EJ, Sawyer BJ, Lynch HM. Energy Expenditure in a Syme's Amputee Triathlete. *Journal of Kinesiology and Wellness - Student Edition* **2020**; 9(2): 47-55.

Freeberg KA, Baughman BR, Vickey T, Sullivan JA, Sawyer BJ. Assessing the ability of the Fitbit Charge 2 to accurately predict VO₂max. *mHealth* **2019**;5:39.

Dexheimer JD, Schroeder ET, Sawyer BJ, Pettitt RW, Aguinaldo AL, Torrence WA. Physiological Performance Measures as Indicators of CrossFit® Performance. *Sports* **2019**, 7(4), 93; <https://doi.org/10.3390/sports7040093>

Brandon Sawyer

Gaesser GA, Tucker WJ, Sawyer BJ, Bhammar DM, Angadi SS. Cycling Efficiency and Energy Cost of Walking in Young and Older Adults. *Journal of Applied Physiology* 124(2): 414-420. <https://doi.org/10.1152/jappphysiol.00789.2017>

Tucker WJ, Sawyer BJ, Jarret CL, Bhammar DM, Ryder JR, Angadi SS, Gaesser GA. High-Intensity Interval Exercise Attenuates, but does not Eliminate, Endothelial Dysfunction after a Fast-Food Meal. *American Journal of Physiology: Heart and Circulatory Physiology* 314(2): H188-H194. <https://doi.org/10.1152/ajpheart.00384.2017>

Bhammar DB, Sawyer BJ, Tucker WJ, Gaesser GA. Breaks in sitting time: effects on continuously monitored glucose and blood pressure. *Med Sci Sports Exer.* 2017; 49(10): 2119-2130.

Sawyer BJ, Tucker WJ, Bhammar DM, Ryder JR, Sweazea KL, Gaesser GA. Effects of High-intensity Interval Training and Moderate-intensity Continuous Training on Endothelial Function and Cardiometabolic Risk Markers in Obese Adults. *J Appl Physiol.* 2016; 121: 279–288

Bhammar DM, Sawyer BJ, Tucker WJ, Lee JM, Gaesser GA. Validity of SenseWear® Armband v5.2 and v2.2 for Estimating Energy Expenditure. *Journal of Sports Sciences.* 2016; 8:1-9. 10.1080/02640414.2016.1140220

Sawyer BJ, Bhammar DM, Tucker WJ, Gaesser GA. Using a Verification Test for Determination of VO₂max in Sedentary Adults with Obesity. *Journal of Strength and Conditioning Research.* 2015; 29(12): 3432–3438.

Tucker WJ, Sawyer BJ, Bhammar DM, Jarrett CL, Gaesser GA. Physiological Responses to High-Intensity Interval Exercise Differing in Interval Duration. *Journal of Strength and Conditioning Research.* 2015; 29(12): 3326–3335

Tucker WJ, Bhammar DM, Sawyer BJ, Buman MP, Gaesser GA. Validity and reliability of Nike + Fuelband for estimating physical activity energy expenditure. *Sports Science, Medicine, and Rehabilitation.* 2015; 7:14. DOI 10.1186/s13102-015-0008-7

Sawyer BJ, Bhammar DM, Angadi SS, Ryder JR, Ryan DM, Sussman EJ, Bertman FMW, Gaesser GA. Heterogeneity of Fat Loss in Response to 12 weeks of Treadmill Walking in Women. Predictors of fat mass changes in response to aerobic exercise training in women. *Journal of Strength and Conditioning Research.* 2014; 29(2): 297-304.

Sawyer BJ, Stokes, DG, Womack, CJ, Morton, RH, Weltman A, Gaesser GA. Strength Training Increases Endurance Time to Exhaustion During High-Intensity Exercise Despite no Change in Critical Power. *Journal of Strength and Conditioning Research.* 2014; 28(3): 601-609.

Meckes N, Vezina JW, Herrmann SD, Sawyer BJ, Angadi S, and Ainsworth, BE. Oxygen Cost of Performing Selected Adult and Child Care Activities. *International Journal of Exercise Science.* 2013; 6(1):Article 3.

Sawyer BJ, Morton RH, Womack CJ, Gaesser GA. VO₂max May Not Be Reached During Exercise to Exhaustion Above Critical Power. *Medicine and Science in Sports and Exercise.* 2012; 44(8):1533-1538.

Gaesser, GA, Angadi, SS, Sawyer, BJ. Exercise and Diet, Independent of Weight Loss, Improve Cardiometabolic Risk Profile in Overweight and Obese Individuals. *Physician and Sports Medicine.* 2011; 39(2):87-97.

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Sawyer, BJ, Blessinger, JR, Irving, BA, Weltman, A, Patrie, JT, Gaesser, GA. Walking and Running Economy: Inverse Association with Peak Oxygen Uptake. *Medicine and Science in Sports and Exercise*. 2010; 42(11): 2122-2127.

Blessinger, J, Sawyer, B, Davis, C, Irving, BA, Weltman, A, Gaesser, GA. Reliability of the VmaxST portable metabolic measurement system. *International Journal of Sports Medicine*. 2009; 30(1): 22-26.

Book Chapters (2 Book Chapters)

Gaesser GA, Angadi SS, Sawyer BJ, Tucker WJ, Jarrett CL. (2014). Exercise and diet improve cardiometabolic risk in overweight and obese individuals without weight loss. In: Glucose Intake and Utilization in Pre-diabetes and Diabetes: Induction of Cardiovascular Disease, Watson & Dokken (Eds), Elsevier. 2014. Chapter 29.

Sawyer BJ, Angadi SS, Gaesser GA. Book Title: Wellness Not Weight: Motivational Interviewing and Health At Every Size. Chapter Title: The Health Benefits of Physical Activity and Diet Independent of Weight Loss. Cognella Academic Publishing. Aug. 28th 2013. Paperback ISBN: 978-1-62131-092-1

Conference Presentations (62 Conference presentations since 2005)

May 2024: Published Poster Presentation, given by Emma Ware, student working with collaborator: National ACSM Meeting, Boston, MA. Impact of Menstrual Cycle on Submaximal Exercise VO_2 and Critical Power in Active Eumenorrheic Females. *International Journal of Exercise Science: Conference Proceedings*: Vol. 2: Iss. 16, Article 136. Available at: <https://digitalcommons.wku.edu/ijesab/vol2/iss16/136>

February 2024: Poster Presentation, given by Emma Ware, student working with collaborator: National ACSM Meeting, Boston, MA. Impact of Menstrual Cycle on Submaximal Exercise VO_2 and Critical Power in Active Eumenorrheic Females.

October 2021: Poster Presentation, given by Sophia Mirth, undergraduate honors student: SWACSM Costa Mesa, CA. A Comparison of High-intensity Interval and Moderate Intensity Continuous Training on Glucose Regulation in Sedentary, Obese Individuals.

June 2020: Thematic Poster Presentation: National ACSM Meeting held virtually. The Effects of High Intensity Interval Training Versus Moderate Intensity Continuous Training on Energy Compensation.

June 2020: Poster Presentation, given by Kirsten Thornhill master's student: National ACSM Meeting held virtually. Reliability of a Submaximal Cycle Ergometer Verification Phase to Confirm VO_{2max}

October 2019: Poster Presentation, given by Kirsten Thornhill master's student: SWACSM meeting Costa Mesa, CA. Reliability of a Submaximal Cycle Ergometer Verification Phase to Confirm VO_{2max}

October 2018: Symposium Presentation, SWACSM meeting Costa Mesa, CA. Energy Compensation: Does a Structured Exercise Intervention Actually Increase Total Daily Energy Expenditure?

October 2018: Poster Presentation, given by Jacob Barragan undergraduate student: SWACSM meeting Costa Mesa, CA. The Effects of HIIT vs MICT on VO_{2max} in Sedentary Adults

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October 2018: Poster Presentation, given by Kai Pattison MS KIN student: SWACSM meeting Costa Mesa, CA. The Effects of High Intensity Interval Training Versus Moderate Intensity Continuous Training on Energy Compensation.

June 2017: Poster presentation: National ACSM meeting Denver, CO. Cardiorespiratory fitness and adiposity do not predict vascular reactivity in sedentary men and women.

June 2017: Thematic Poster presentation, given by Brett Baughman MS KIN student: National ACSM meeting Denver, CO. Comparison of Blood Flow Characteristics Before, During, and After High-Intensity Interval and Moderate-Intensity Continuous Exercise.

June 2017: Poster presentation by Jenny Beers, MS KIN student: National ACSM meeting Denver, CO. Determining The Optimal Work Rate For Cycle Ergometer Verification Phase Testing In Males With Obesity

June 2017: Oral Presentation, given by Kirbie Huwa, MS KIN Student: National ACSM meeting Denver, CO. Effects of High-intensity Interval and Continuous Moderate Training on Sleep in Sedentary Obese Adults

June 2017: Poster presentation: National ACSM meeting Denver, CO. Sex Differences In The Optimal Intensity For Cycle Ergometer Verification Of VO₂max

October 2017: Poster presentation, given by Brett Baughman: SWACSM meeting Long Beach, CA. Differences in Blood Flow during ON and OFF Intervals with High-Intensity Interval Exercise.

October 2017: Poster presentation, given by Kaitlin Freeberg: SWACSM meeting Long Beach, CA. Assessing the Ability of the Fitbit Charge 2 to Accurately Predict VO₂max.

October 2016: Poster presentation, given by Janie Unkefer: SWACSM meeting Costa Mesa, CA. Sex Differences in the Optimal Intensity for Cycle Ergometer Verification of VO₂max

October 2016: Poster presentation, given by Brett Baughman: SWACSM meeting Costa Mesa, CA. The Acute Effects of High-Intensity Interval and Moderate-Intensity Continuous Exercise on Measures of Vascular Function.

October 2016: Poster presentation, given by Jennifer Beers: SWACSM meeting Costa Mesa, CA. Determining The Optimal Work Rate For Cycle Ergometer Verification Phase Testing In Males With Obesity

June 2016: Poster presentation: National ACSM meeting Boston, MA. Body composition and physical activity maintenance one year after a 12-week exercise intervention in women

October 2015: **Invited Oral presentation:** SWACSM meeting Costa Mesa, CA. Biological variability in fat loss in response to exercise training

October 2015: Poster presentation, given by Patricia Benedict: SWACSM meeting Costa Mesa, CA. Comparison of Blood Flow Characteristics During High Intensity Interval Exercise and Moderate Continuous Exercise

October 2015: Poster presentation, given by Kai Pattison: SWACSM meeting Costa Mesa, CA. Determining the Optimal Work Rate for Cycle Ergometer Verification Phase Testing in Males

October 2015: Poster presentation, given by Brett Baughman and Jennifer Beers: SWACSM meeting Costa Mesa, CA. Determining the Optimal Work Rate for Cycle Ergometer Verification Phase Testing in Females

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May 2015: **Oral presentation:** ACSM National Meeting, San Diego, CA. Sawyer BJ, Tucker WJ, Bhammar DM, Gaesser GA. Vigorous-Intensity Exercise Training Does not Alter Spontaneous Physical Activity Levels in Obese, Sedentary Adults.

May 2014: **Oral presentation:** ACSM Meeting Orlando, FL. Sawyer BJ, Bhammar DM, Tucker WJ, Gaesser GA. Effects of High-Intensity Interval and Continuous Training on Endothelial Function and Glucose Regulation in Obesity

May 2014: ACSM Meeting Orlando, FL., Bhammar DM, Sawyer BJ, Tucker WJ, Gaesser GA. Poster Presentation: Effects of Intermittent vs. Continuous Exercise on Glucose Regulation and 24-Hour Ambulatory Blood Pressure

May 2014: ACSM Meeting Orlando, FL. Clark, B, Sawyer, BJ, et al. Poster Presentation: Validation of a Wireless, Multimode, Polynomial Neural Network-Based Physical Activity Monitor on Children

May 2014: ACSM Meeting Orlando, FL. Tucker, Wesley, J, Sawyer, Brandon, J, et al. Poster Presentation: High-Intensity Interval Exercise and Endothelial Dysfunction Associated with a High-Fat Meal in Healthy Males

October 2013: Poster presentation: Southwest ACSM meeting Newport Beach, CA Sawyer, Brandon, J. "High-Intensity Interval and Continuous Vigorous Exercise Training in Obese Adults: Divergent Effects on Flow-Mediated Dilation".

October 2013:Poster presentation: Southwest ACSM meeting Newport Beach, CA Hotzapfel, Simon, Sawyer, Brandon, et al. "Improvements in VO₂peak are unrelated to changes in submaximal heart rate after 12 weeks of aerobic walking in women".

October 2013: Poster presentation: Southwest ACSM meeting Newport Beach, CA Jarrett, Catherine, L, Sawyer, Brandon, J, et al. "Improvements in Aerobic Fitness Following a Moderate-Intensity Exercise Program is Independent of Step Counts Among Sedentary Adult Females".

October 2013: Poster presentation: Southwest ACSM meeting Newport Beach, CA Tucker, Wesley, J, Sawyer, Brandon, J, et al. "High-Intensity Interval Exercise and Endothelial Dysfunction Associated with a High-Fat Meal in Healthy Males".

May 2013: ACSM meeting Indianapolis: Sawyer BJ, Bhammar DM, Tucker WJ, Gaesser GA. Use Of The Verification Phase For Confirming 'True' Vo₂max In Sedentary Obese Adults. *Medicine & Science in Sports & Exercise*: 45(5S): 689.

May 2013: ACSM meeting Indianapolis: Tucker WJ, Malone C, Sawyer BJ, Bhammar DM, Gaesser GA. Comparison of the Physiological Responses to two High Intensity Interval Training Protocols. *Medicine & Science in Sports & Exercise*: 45(5S):664.

May 2013: ACSM meeting Indianapolis: Bhammar DM, Sawyer BJ, Tucker WJ, Baez J, Gaesser GA. Physical Activity and Energy Expenditure Measurements Using Sensewear Armband, Actiheart and Actigraph in Adults. *Medicine & Science in Sports & Exercise*: 45(5S):327

May 2013: ACSM meeting Indianapolis: Clark B, Wiles C, Bhammar DM, Sawyer BJ, Parker BE, Gaesser GA. Validation Of A Wireless, Multimode, Polynomial Neural Network-based Physical Activity Monitor. *Medicine & Science in Sports & Exercise*: 45(5S):622.

May 2013: ACSM meeting Indianapolis: Knurick JR, Tucker WJ, Bhammar DM, Sawyer BJ, Gaesser GA. Accuracy of the SenseWear Arm Band in Young and Older Adults. *Medicine &*

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Science in Sports & Exercise: 45(5S):690.

October 2012: Poster presentation: Southwest ACSM meeting Newport Beach, CA. Predictors of Compensation to Exercise-Induced Weight Loss in Women

October 2012: Poster presentation: Southwest ACSM meeting Newport Beach, CA. Accuracy Of The Sensewear Pro Armband In Assessing Energy Expenditure During Steady State And Non-Steady State Activities In Young And Older Adults

October 2012: Poster presentation: Southwest ACSM meeting Newport Beach, CA. Accuracy And Test-Retest Reliability Of Sensewear Armband, Actiheart And Actigraph In Assessing Exercise Energy Expenditure In Adults

May 2012 ACSM in San Francisco: Sawyer BJ, Stokes DG, Womack CJ, Morton RH, Weltman A, Gaesser GA. Effects of Strength Training on Parameters of the Power-Duration Relationship Using Linear and Non-linear Models. *Medicine & Science in Sports & Exercise*. 2012; 44(5S): 673.

May 2012 ACSM in San Francisco: Bhammar D, Sawyer BJ, Angadi SS, Gaesser GA. Accuracy of Sensewear® Pro Arm Band In Estimating Energy Expenditure During Steady-state and Non-steady-state Physical Activity. *Medicine & Science in Sports & Exercise*. 2012; 44(5S): 646-7.

May 2012 ACSM in San Francisco: Ryan DM, Carr NS, Sawyer BJ, Angadi SS, Chisum J, Gaesser GA. Effect of High-Intensity Interval Training on 2-kilometer Ergometer Time-Trial Performance in Female High School Rowers. *Medicine & Science in Sports & Exercise*. 2012; 44(5S):237.

April 2012 Experimental Biology San Diego: Sawyer BJ, Bhammar D, Angadi SS, Ryder JR, Ryan DM, Gaesser GA. Heterogeneity in Total Body Fat Changes After Aerobic Exercise Training is Similar in Women With Lower and Higher Amounts of Body Fat. *FASEB J*; 26:1142.17

April 2012 Experimental Biology San Diego: Bhammar D, Sawyer BJ, Angadi SS, Ryder JR, Ryan DM, Gaesser GA. Air Displacement Plethysmography Weakly Predicts Changes in Percent Body Fat in Comparison to Dual X-ray Absorptiometry After Aerobic Exercise Training in Women. *FASEB J*; 26:1142.58

October 2011: Poster presentation: Southwest ACSM meeting Reno, NV. Ability Of The Sensewear™ Arm Band To Predict Energy Expenditure During Free-Living Activities

October 2011: Poster presentation: Southwest ACSM meeting Reno, NV. Accuracy Of Sensewear™ Armband In Estimating Energy Expenditure In Older Adults During A Controlled Exercise Trial

October 2011: Poster presentation: Southwest ACSM meeting Reno, NV. The Effect Of High Intensity Interval Training On 2-Kilometer Times In Female High School Rowers

May 2011 ACSM in Denver: Sawyer BJ, Morton RH, Womack CJ, Gaesser GA. VO₂max May Not Be Reached During Exercise to Exhaustion Above Critical Power. *Medicine & Science in Sports & Exercise*. 2011; 43(5):S802.

May 2011 ACSM in Denver: Vezina JW, Meckes N, Herrmann SD, Angadi SS, Sawyer BJ, Ainsworth BE. Oxygen Cost of Several Care-oriented Activities in an Adults Population. *Medicine & Science in Sports & Exercise*. 2011; 43(5):S476.

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May 2011 ACSM in Denver: Ryan D, Sawyer BJ, Angadi SS, Patrie J, Browning R, Gaesser GA. Percent Body Fat is Negatively Correlated to Walking Efficiency in a Group of Obese and Nonobese Men and Women. *Medicine & Science in Sports & Exercise*. 2011; 43(5):S634.

May 2011 ACSM in Denver: Carr N, Ryan D, Angadi SS, Sawyer BJ, Chisum J, Gaesser GA. Predictors of 2-Kilometer Time Trial Performance in Female High School Rowers. *Medicine & Science in Sports & Exercise*. 2011; 43(5):S627-8.

October 2010: Poster presentation: Southwest ACSM meeting San Diego, CA: VO_{2max} May Not Be Reached During Exercise To Exhaustion Above Critical Power

October 2010: Mentor for student, poster presentation: Southwest ACSM meeting San Diego, CA: The Effect(S) Of Caffeine On Running Economy. Winner of a student research award

May 2010: ACSM in Baltimore: Sawyer, BJ, Irving, BA, Patrie, J, Angadi, SA, Gaesser, GA. Percent body fat is positively correlated to walking and running. *Medicine & Science in Sports & Exercise*. 2010; 42(5):S624.

November 2009: Poster presentation: Southwest ACSM meeting San Diego, CA: Percent Body Fat Is Positively Correlated To Walking And Running Economy/Efficiency In Healthy Men And Women

November 2009: Poster presentation: Southwest ACSM meeting San Diego, CA: The Effects Of Water Training Vs. Field Training On The Maintenance Of Aerobic And Anaerobic Fitness In Soccer Athletes

November 2008: Poster presentation: Southwest ACSM meeting San Diego, CA: The Slope Of The O_2 -Speed Relationship During Walking And Running Is Positively Correlated To VO_{2Peak} In Healthy Males And Females

May 2006 ACSM in Denver: Gaesser GA, Clark BR, Parker BE, Olowin AB, Richardson NT, Blessinger JR, Sawyer BJ, Davis CK, Welk GJ, Irving BA. Validation of an integrated heart rate/physical activity monitor. *Medicine & Science in Sports & Exercise*. 2006; 38(5): S556.

May 2006 ACSM in Denver: Sawyer, BJ, Blessinger, JR, Irving, BA, Weltman, A, Patrie, JT, Gaesser, GA. Walking and running economy are weakly inversely correlated to maximal oxygen consumption in healthy males and females. *Medicine & Science in Sports & Exercise*. 2006; 38(5): S169.

February 2005: Poster presentation: South East ACSM meeting Charlotte, NC: Walking And Running Economy Are Weakly Inversely Correlated To Maximal Oxygen Consumption In Healthy Males And Females

Service to the Profession

Guest Editor for Sports Journal, special edition entitled: Exercise Physiology: New Frontiers for Exercise Testing and Prescription. Published September 2021.

Peer Reviewer for Sports Journal, 2019-Present

2014-2018 Student Jeopardy Official at SWACSM

Peer Reviewer for Medicine and Science in Sports and Exercise (4 reviews since 2013)

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Peer Reviewer for The International Journal of Sports Medicine, The Journal of Applied Physiology, The Journal of Strength and Conditioning Research, Biomed Central Public Health, Sports Sciences, and European Journal of Applied Physiology (9 reviews since 2014)

October 2015 SWACSM Student Research Award Judge and Abstract Reviewer

October 2014 SWACSM Student Research Award Judge

Awards/Grants

August 2017: American Council on Exercise Research Grant: \$10,000. Project title: Energetic Compensation Responses to Exercise

May 2013: Outstanding Graduating Scholar Award from Arizona State University Physical Activity Nutrition and Wellness PhD program

November 2012: Arizona State University Graduate and Professional Student Research Grant: \$2000

July 2012: Medtronic Diabetes Foundation equipment donation award. Amount: ~\$8000

Teaching Experience

August 2013 – Present: Professor at Point Loma Nazarene University in the Kinesiology and Biology Departments. Courses taught: Exercise physiology lecture and lab, Human anatomy and physiology lecture and lab, Master's Course: Advanced/Clinical Exercise Physiology, Physician Assistant Program course: Physiology

August 2012 – December 2012: Arizona State University Teaching Assistant in the Exercise and Wellness Department. Courses taught: Exercise Testing Laboratory

August 2007 – June 2010: Point Loma Nazarene University Assistant Professor in the Kinesiology Department. Courses taught: Risk Management and Emergency Response, Exercise Physiology, Advanced Exercise Physiology, Athletic Training Practicum courses, and Pharmacology/Therapeutic Modalities

October 2006 – May 2006: California State University Fresno lecturer in the kinesiology department, Fresno, CA. Courses taught: Therapeutic Modalities, Injury and Illness Assessment I: Upper Extremity, Introduction to Athletic Training, Preliminary Athletic Training, Injury and Illness Assessment II: Lower Extremity (Lab), and Rehabilitation Techniques II (Lab)

January 2006 – July 2006: American Red Cross instructor for the University of Virginia, Charlottesville, VA. Courses taught: Adult, Child, and Infant Cardiopulmonary Resuscitation (CPR) and First-Aid

September 2005 – July 2006: American Red Cross instructor for the Red Cross of the Blue Ridge, Staunton, VA. Courses Taught: Adult, Child, and Infant Cardiopulmonary Resuscitation (CPR), First-Aid, Automated External Defibrillator (AED), and Blood-Borne Pathogens

January 2006 – June 2006: Substitute teacher for Albemarle County, VA public schools. Taught all subjects from sixth to twelfth grade

January 2006 – May 2006: Substitute teacher for Charlottesville city public schools, VA. Taught all

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subjects from fifth to eighth grade

Research Experience

Current research at PLNU including independent Summer research and student honors projects:

- Characterization of blood flow dynamics during high-intensity interval exercise compared to continuous exercise
- Determination of the best protocol for the verification phase of VO_{2max} test
- Determining the ideal exercise prescription to avoid or reverse energetic compensation to aerobic exercise.

August 2010 – June 2013: Research Associate for the Healthy Lifestyles Research Center at the Arizona State Poly-Technic Campus. Responsible for designing, coordinating, conducting, and analyzing multiple funded studies. Studies include:

- Dissertation: 8 Weeks of high intensity interval training for the improvement of blood glucose and blood pressure control, endothelial function, visceral adipose tissue, insulin sensitivity, blood lipids, LDL oxidizability, nitric oxide availability, and antioxidant capacity in sedentary, obese adults (20 subjects). Funded by Medtronic Diabetes Foundation and ASU internal research funding
- NIH funded Activity Monitor Study (RO1: ~ 300 subjects tested)
- 12-week supervised exercise intervention with 82 women funded by Reebok (testing EasyTone shoes). Supervised 7 graduate students
- Ability of exercise to ameliorate the negative effects of a high fat meal on artery function, blood glucose, and blood triglycerides
- Ability of exercise to protect against metabolic impairments due to a diet supplemented with high levels of sugar and fat
- The effects of intermittent high intensity exercise on blood glucose and blood pressure control
- The effect of vitamin D3 supplementation on endothelial function
- Product testing for Proctor and Gamble
- Product validation for Nike

March 2007 – June 2010: Advisor and committee member for multiple Point Loma Nazarene University student honors research projects

September 2005 – January 2006: Master's Thesis: The Interrelatedness of Maximal Oxygen Consumption and Economy

May 2005 – July 2006: Research coordinator and lab technician in exercise physiology research. Coordinated research schedule, recruited subjects, assisted with history, physical, and consent process, conducted research, data processing, and data analysis.

September 2004 – May 2005: Research assistant for an exercise training study at the University of Virginia. The effects of high and low intensity exercise on abdominal visceral fat were investigated.

January 2004 – May 2004: Undergraduate research project: Neuroticism, Extroversion, and Pain Perception in College Aged Athletes

Professional Experience

August 2007 – June 2010: Director of Rehabilitation Services, Point Loma Nazarene University Sports Medicine Clinic. In charge of overseeing, supervising, and conducting all administrative and organizational duties of the clinic. Extensive policy writing and implementation. Provided on- and off-field injury prevention, management, assessment, care, and rehabilitation of athletic

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injuries.

March 2007 – June 2007: Associate Athletic Trainer Central Valley Coyotes Arena Football Club. Provided on- and off-field injury prevention, management, assessment, care, and rehabilitation of athletic injuries.

January 2007 – March 2007: Per-Diem Athletic Trainer Community Hospital (Fresno, Central, San Joaquin Memorial, and Clovis School Districts). Provided on- and off-field injury prevention, management, assessment, care, and rehabilitation of athletic injuries for all high schools around the Fresno area.

October 2006 – January 2007: Head Athletic Trainer for Fresno High School, Fresno, CA. Provided on- and off-field injury prevention, management, assessment, care, and rehabilitation of athletic injuries.

February 2004 – May 2004: Staff athletic trainer at Point Loma Nazarene University, San Diego, CA. Managed the university sports medicine clinic. Conducted on- and off-field prevention, management, assessment, care, and rehabilitation of athletic injuries for various collegiate sports. Supervised and mentored athletic training students.

April 2003 – February 2004: Season intern athletic trainer San Diego Chargers. Training room management: stocking supplies, cleaning, and practice preparation. Provided on- and off-field injury prevention, management, assessment, care, and rehabilitation of athletic injuries during practice and games. Supervised five summer interns. Traveled with team to games, being responsible for all medical supplies.

April 2002 - January 2003: Summer intern athletic trainer San Diego Chargers. Provided on- and off-field injury prevention, management, assessment, care, and rehabilitation of athletic injuries during practice and games.